CLAIMS:

1. An X-ray bulb comprising:

a bulb envelope;

a bulb coating disposed on at least a part of a surface of the bulb envelope, wherein the bulb coating is configured to form a focusing surface; and

a target configured to rotate about an axis such that a varying portion of the target passes through a focal point of the focusing surface.

2. The X-ray bulb of claim 1, wherein the axis is geared to rotate based upon the motion of the X-ray bulb about a volume to be imaged.

3. The X-ray bulb of claim 1, wherein the bulb coating is disposed on an interior surface of the bulb envelope.

4. The X-ray bulb of claim 1, wherein the target comprises at least one of a metal and a metal alloy.

5. The X-ray bulb of claim 1, wherein the target comprises a metal having an atomic number of at least about 40.

6. The X-ray bulb of claim 1, wherein the bulb envelope comprises glass.

7. The X-ray bulb of claim 1, wherein the bulb envelope comprises a laser transparent material.

8. The X-ray bulb of claim 1, wherein the bulb envelope comprises a laser transparent polymer.

9. The X-ray bulb of claim 1, wherein at least a partial atmosphere of an inert gas is within the bulb envelope.

10. The X-ray bulb of claim 1, wherein the bulb coating comprises at least one of a metal and a dielectric material.

11. An imaging system comprising:

one or more X-ray bulbs configured to emit X-rays at different locations relative to an imaging volume, each X-ray bulb comprising:

a bulb envelope;

a bulb coating disposed on at least a part of a surface of the bulb envelope, wherein the bulb coating is configured to form a focusing surface; and

a target configured to rotate about an axis such that a varying portion of the target passes through a focal point of the focusing surface;

a laser source configured to generate a laser beam; and

a laser targeting system configured to focus the laser beam upon one of the bulb coatings at a time.

12. The imaging system of claim 11, further comrpising a motion subsystem configured to move the one or more X-ray bulbs along an imaging trajectory.

13. The imaging system of claim 12, wherein the motion subsystem is configured to move the one or more X-ray bulbs along a tomosynthesis imaging trajectory.

14. The imaging system of claim 12, wherein the motion subsystem is configured to move the one or more X-ray bulbs by moving a CT gantry.

15 The imaging system of claim 11, wherein the imaging volume comprises a tomosynthesis imaging volume.

16. The imaging system of claim 11, wherein the imaging volume comprises a CT bore volume.

17. The imaging system of claim 11, wherein the one or more X-ray bulbs comprise a plurality of X-ray bulbs positioned generally around at least a portion of the imaging volume.

18. The imaging system of claim 11, wherein the one or more X-ray bulbs comprise a plurality of X-ray bulbs positioned at substantially equal intervals about the imaging volume.

19. The imaging system of claim 11, further comprising one or more detector arrays disposed about the imaging volume such that X-rays emitted by the one or more X-ray bulbs impact the one or more detector arrays.

20. The imaging system of claim 11, wherein a respective axis is geared to rotate based upon the motion of the respective X-ray bulb about the imaging volume.

21. The imaging system of claim 11, wherein the laser targeting system comprises a two-axis galvanometer.

22. The imaging system of claim 11, wherein the laser source comprises at least a laser oscillator and a laser amplifier.

23. A method for irradiating a volume, the method comprising:

moving an X-ray bulb relative to a volume to be imaged, the X-ray bulb comprising a target configured to rotate about an axis such that a varying portion of the target passes through a focal point of a focusing surface formed by a bulb coating; and

generating an X-ray producing plasma by focusing a laser beam onto the varying portion of the target via the bulb coating.

24. The method of claim 23, wherein moving the X-ray bulb comprises rotating a CT gantry to which the X-ray bulb is attached.

25. The method of claim 23, wherein moving the X-ray bulb comprises moving the X-ray bulb along a tomosynthesis imaging trajectory.

26. The method of claim 23, further comprising detecting the X-rays on one or more detector arrays.

27. The method of claim 23, further comprising generating one or more projection images based upon signals produced by the one or more detector arrays in response to the detected X-rays.

28. A method for irradiating a volume, the method comprising:

sequentially aiming a laser beam at each of a plurality of X-ray bulbs differentially positioned relative to a volume to be imaged, wherein each X-ray bulb comprises a target configured to rotate about an axis such that a varying portion of the target passes through a focal point of a focusing surface formed by a bulb coating; and

generating an X-ray producing plasma in each X-ray bulb by focusing the laser beam onto the varying portion of the respective target via the bulb coating when the laser beam is aimed at the respective X-ray bulb.

29. The method of claim 28, wherein the volume to be imaged comprises a tomosynthesis imaging volume.

30. The method of claim 28, wherein the volume to be imaged comprises a CT bore volume.

31. The method of claim 28, wherein the plurality of X-ray bulbs are positioned generally around at least a portion of the volume to be imaged.

32. The method of claim 28, wherein the plurality of X-ray bulbs are positioned at substantially equal intervals about the volume to be imaged.

33. The method of claim 28, further comprising detecting the X-rays on one or more detector arrays.

34. The method of claim 33, further comprising generating one or more projection images based upon signals produced by the one or more detector arrays in response to the detected X-rays.

35. A method for generating X-rays, the method comprising:

rotating a target within an X-ray bulb;

focusing a laser beam onto a focal point through which the target rotates; and

indexing the target to raster the focal point such that the focal point successively focuses on a previously unexposed portion of the target.

36. The method of claim 35, wherein focusing the laser beam comprises focusing the laser beam upon an interior bulb coating which focuses the laser beam onto the focal point.

37. The method of claim 35, wherein the focal point is rastered radially along the target.

38. The method of claim 35, further comprising moving the X-ray bulb about a volume to be imaged.